TECHNICAL BOOK REVIEW INDEX

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JULIA C. WALLACE, *Editor*

Volume 14 **October, 1948** **Number 8**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Albert, A. L. Fundamental electronics and vacuum tubes. Revised and reset edition. 510p. 1947. Macmillan, New York, $6.50.

Electronics, Aug. 1948, p.212, 214. ½ col.

"Aimed at junior or senior college students taking their first general course in electronics and, therefore, can be adapted to courses preliminary to a more intensive study of communication engineering or power generation and use." *K. H.*

Alter, Dinsmore, & Cleminshaw, C. H. Pictorial astronomy. 288p. 1948. Griffith Observatory, Los Angeles, $3.15.

Sky and telescope, Aug. 1948, p.254. 1⅛ col.

"Written primarily for the layman, although the authors mention that it is also suitable for a short cultural course in astronomy or for use in high schools. These purposes it should serve admirably . . . Attractively arranged and, as the title suggests, copiously illustrated with photographs and diagrams . . . Excellently written with a view to making the subject readily understood. Veteran astronomers and teachers will welcome this new presentation and the illustrations, many of which are large enough to display before small classes. One feature of special interest to the layman, and often treated scantily in other texts, is abundant historical information . . . The book might be introduced as providing answers to many of the questions often asked by laymen, students, and children . . . The whole subject of astronomy is quite adequately covered with up-to-date information. The many tables set forth a wealth of information in a brief, handy form. If an index had been provided the book would be much more convenient as a ready reference . . . Should serve as a welcome and popular addition to many libraries on astronomy." *Ruth Hayner.*

Archer, R. S., and others. Molybdenum; steels, irons, alloys. 391p. 1948. Climax Molybdenum Co., 500 Fifth Ave., New York, gratis.

Petroleum processing, Sept. 1948, p.904. ½ col.

"The authors have tried successfully to overcome a usual disadvantage of the handbook method of presentation—that of simply compiling uncorrelated data. They have shown the fields of similarity and dissimilarity of the various materials and have indicated some of the factors that may affect the choice of the most economical material for a specific piece of equipment. Considerable information is included on more recent developments offered free of charge to metallurgists in the petroleum processing industry upon written request to the company."

Welding journal, Aug. 1948, p.644. ½ col.

"The varied applications of molybdenum as an alloying element are described in this book, which covers a wide range of materials from wrought to cast steels and from cast iron to nonferrous alloys. The major emphasis has been placed on the presentation of the fundamentals that must guide all engineers, designers and metallurgists in their selection of the most suitable materials for a given application . . . Considerable recent information is included, not only on the more prominent developments, such as the gas turbine steels and alloys, but also on the work that has served to clarify the factors affecting the service life of the lower alloy steels. The references to current literature are adequate to facilitate further reading by anyone who desires more detailed data."

Bergmann, Ernest David. Chemistry of acetylene and related compounds. 108p. 1948. Interscience Publishers, New York, $3.

Canadian metals & metallurgical industries, July 1948, p.38. ½ col.

"Delivered as a seminar on Acetylene Chemistry at the Polytechnic Institute of Brooklyn in the fall of 1946 this book consists of three lectures . . . The general subject matter is a

concise summary of experimental material presented as completely and logically as possible. The large scale researches of Drs. Weizman and Reppe are mentioned in some detail because of their preponderant concern with this field. Extensive references accompany the text."

Bewley, Loyal V. Two-dimensional fields in electrical engineering. 204p. 1948. Macmillan, New York, $5.50.

Military engineer, Sept. 1948, p.440. ⅓ col.

"Designed to show typical magnetic and electric problems and to introduce students to mathematical physics . . . An initial chapter on the theory of functions of a complex variable is followed by two dimensional fields of flow, general theorems of mathematical physics and their application, conformal transformations, method of images, freehand flux plotting, and mechanical forces due to electromagnetic reactions. An appendix on models and analogy by W. F. Hiltner and an index are added. Each chapter contains a select bibliography of the related literature. Recommended for the reference library of the electrical engineer." *F. K.*

Blocker, John G. Cost accounting. Ed.2, revised. 733p. 1948. McGraw, New York, $5.50.

N.A.C.A. bulletin, Aug. 15, 1948, *section 2,* p.1577. ½ p.

"The revisions given effect to in the present edition of this text . . . are intended to shift emphasis from descriptions of cost accounting procedures to their utilization by management . . . The author . . . indicates that all problem material is new and tested by student use. An appendix includes 'all the C.P.A. cost problems given by the American Institute of Accountants from 1932 to November 1947'."

Brailsford, F. Magnetic materials. 156p. 1948. Methuen, London, 6s.

Discovery, July 1948, p.232. ½ col.

"Wisely, in a book of this size, the author has confined himself to a description of the properties of magnetic materials, with a few very simple details of the physical processes which give rise to these properties. He has not attempted to write a text-book on metallurgy or electrical engineering design . . . Not intended for popular reading, but its demands on the previous knowledge of the reader are sufficiently modest for it to be recommended to students of physics, metallurgy, or electrical engineering at any stage beyond, say, the Intermediate. At the same time much of the information is so recent and otherwise so inaccessible that even those working on magnetic materials may find something of value in this volume." *M. McCaig.*

Electrical review, July 30, 1948, p.187. 8 l.

"One of the publisher's series of monographs outlining and summarizing physical subjects. The information given is very brief, but at the end of each chapter there are references to books, original papers and articles consulted by the author, who has also included some Metro-Vickers information not hitherto published." *W. O. F.*

Endeavour, July 1948, p.127. ⅘ col.

"The author . . . gives a comprehensive though necessarily brief outline of the present knowledge of the subject. It is suitable for advanced students, research workers, and those concerned with the applications of magnetic materials . . . Can . . . be unreservedly recommended to anyone interested either in the theory or in the manufacture and application of magnetic materials." *G. W. O. Howe.*

Proceedings of the Physical Society, July 1, 1948, p.104. ½ p.

"The materials . . . are studied under three headings: Iron and Silicon-Iron Alloys, Nickel-Iron and other Alloys, and Permanent Magnet Materials. All students should find these sections very helpful. Lists of original references are given, and it should therefore be easy to follow up particular points of interest. The author has certainly packed a great deal of useful information into a very small space, mainly by the wise use of graphs . . . Can be unreservedly recommended to all interested in the subject." *L. F. Bates.*

Briggs, G. A. Loudspeakers; the why & how of good reproduction. 87p. 1948. Warfdale Wireless Works, Idle, Bradford, England, 5s.

Electronics, Aug. 1948, p.225. ⅔ col.

"Written for domestic high-fidelity addicts, this pithy pamphlet presents the essentials for intelligent selection and evaluation of loudspeakers. The author has drawn liberally from books on music, acoustics, and circuits to illustrate points, thus providing the nontechnical reader with highlights from these works and an excellent short bibliography for those wishing to delve deeper into the subject." *F. H. R.*

Brough, J. C. S., ed. Timbers for woodwork. 215p. Evans Bros., Ltd., Montague House, Russell Sq., London, W.C.1, 7s. 6d. net.

Wood, Aug. 1948, p.233. ⅓ col.

"A very useful volume, of a handy size, and contains in a concise form much information concerning the sources of commercial timbers, the peculiar properties of wood viewed as a raw material, its conversion and seasoning . . . The type is bold and easy to read and the maps and illustrations carefully prepared. Several printer's errors have unfortunately been overlooked . . . nearly all in the botanical names of the various species." *A. C.*

Chatfield, H. W. Varnish constituents. Ed.2. 592p. 1947. L. Hill, London, $10.30.

Chemical and engineering news, Sept. 6, 1948, p.2641. 1 col.

"Should prove of great value to the practical varnish technologist since it will give him a more fundamental understanding of the materials with which he works. It will likewise be of value to the beginner in the coatings field because of its stress on basic principles, rather than rule-of-thumb practices." *Herman J. Lanson.*

Church, Austin H. Elementary mechanical vibrations. 200p. 1948. Pitman, New York, $3.25.

Journal of the Acoustical Society of America, July 1948, p.555. 2 col.

"An elementary text suitable for juniors and seniors in engineering colleges or for practicing engineers who desire a simple and practical introduction to the theory of mechanical vibrations . . . Assumes that the student has a knowledge of elementary statics, dynamics, strength of materials, and differential and integral calculus. In general, the mathematical apparatus used . . . is kept to the minimum necessary for adequate understanding . . . De-

serves attention since it is the first attempt made in the United States to bring the theory of vibration to the notice of undergraduates in more detail than in the brief discussion found in elementary physics texts and in less elaboration than in the fairly numerous existing treatises on the subject." *J. Ormondroyd.*

Collins, George B., ed. Microwave magnetrons. 769p. 1947. McGraw, New York, $9. (M.I.T. radiation laboratory series.)

Electronics, Sept. 1948, p.228, 230. 1¼ col.

"Upon studying this book, one is impressed with its uniqueness, scope, and general excellence. For a worker in the field of microwave magnetrons it is unquestionably an essential." *H. W. Anderson.*

Corfield, D. N., & Cundy, P. V. Valve technique. 99p. Radio Soc. of Great Britain, New Ruskin House, Little Russell St., London, W.C.1, 3s. 6d.

Electronic engineering, Aug. 1948, p.270. ¾ col.

"An excellent publication, filling a vacancy which has long existed despite the flood of valve and electronic textbooks in recent years . . . The handling of the push-pull variants, classes A, AB, B, etc., together with the curves, is admirably done. The explanation of a method of producing dynamic curves from static curves, as found in catalogues, is very lucid and will solve what has been to many amateurs rather a closed book. The principle of adopting the B.S.I. and B.R.V.M.A. convention of symbols is an excellent idea tending towards uniformity with the valve catalogues." *C. C. McC.*

Wireless world, Aug. 1948, p.284. 1 col.

"Sets out to 'present in as simple a manner as possible the calculations associated with the application of thermionic valves.' It is obvious that only a part of this field can be covered in the space of 99 pages, and many omissions can be explained by the somewhat obscure line of demarcation drawn between valve and circuit technique . . . The greater part of the book is comprised of useful material." *L. A. M.*

Corkhill, Thomas. Glossary of wood. 656p. 1948. Nema Press, Ltd., 33 Tothill St., London, S.W.1, £1 1s.

Colliery engineering, Sept. 1948, p.294. ¼ col.

"Every kind of timber, grown all the world over, is included, useful notes being given on the weight, characteristics and suitability for certain uses in each case. Difficulties of nomenclature are admirably elucidated . . . This book can hardly fail to be of interest to those who fell wood, who sell wood, who use wood, and even to those who merely like wood."

Food, Aug. 1948, p.253. ⅓ col.

"The volume is indeed a woodworker's *vade mecum,* invaluable to those concerned with wood and having a considerable fascination also for a wider public." *E. C.*

Power & works engineering, Sept. 1948, p.260. ¼ col.

"Explains no fewer than 10,000 terms connected with timber and its use, about 1,000 of them being illustrated. Every kind of timber, grown in all countries, is classified and described; qualities, weights and uses are given. Both simple and advanced woodworking tools; manufacturers' products; furniture; architectural features; buildings and other structures; wood in the building of railway carriages and wagons, ships and boats; carvings, scaffolding, shoring and shuttering; fencing components and fittings; these are a few of the many subjects covered . . . Should be of great utility to a very wide circle of readers, and not least to factory executives."

Corrie, Frank Ewart. Some elements of plants and animals; the mineral elements in plant and animal nutrition. 120p. 1948. Fertiliser Journal, Ltd., 110 Cannon St., London, E.C.4, 8s. 6d.

Chemical trade journal and chemical engineer, July 16, 1948, p.73. ½ col.

"Mr. Corrie has performed a very useful service in assembling the main available authoritative data in readily accessible form. The mineral elements covered are calcium, phosphorus, potassium, magnesium, sulphur, sodium, chlorine iron, iodine copper, manganese, cobalt and boron, the other elements about which less is at the moment known being discussed in a chapter of their own. For the reader seeking additional information there are copious references to the original literature . . . Based on a series of articles which Mr. Corrie contributed to the 'Fertiliser and Feeding Stuffs Journal'."

Coulson, Charles A. Electricity. 266p. 1948. Interscience Publishers, New York, $3.75. (University mathematical texts series.)

General Electric review, Sept. 1948, p.53. ½ col.

"The author has undertaken the formidable task of covering the many topics from electrostatics and permanent magnetism to alternating-current theory and Maxwell's Equations in one small volume. The result is an excellent, readable, semiadvanced survey of important principles . . . Intended . . . primarily for students with a rather advanced mathematical background but with only an elementary knowledge of electricity. They should find it technically equivalent to many advanced physics texts, but much easier to understand. Engineering students are apt to have had more detailed courses in the physical topics covered here before they have mastered the mathematics required to use the book. Many engineers will find it a concise, straightforward reference for basic electrical theory." *Dean B. Wheeler.*

Crawford, M. D. C. Heritage of cotton. 294p. c1948. Fairchild, New York, $3.

Rayon and synthetic textiles, Sept. 1948, p.145. ⅘ col.

"Not merely a handbook of information—it is a vivid account of 'a product of human institutions' and its effect on the history of man. Mr. Crawford has kept his narrative as free from technicalities and statistics as the subject will permit . . . Invaluable as a basic source of information to any member of the cotton trade. However, because of the human and absorbing manner in which the subject is treated, it is of equal value to those who may not be commercially involved in the industry but who have an interest in the role [sic] played by cotton in the civilization of the world."

Textile research journal, July 1948, p.440. ⅔ col.

"Rarely does one have the privilege of reading a book that is so well written that facts concerning technical developments become as inter-

esting as events in the lives of his favorite characters. *The Heritage of Cotton* is such a book. Progress in the cotton industry, throughout the world, is portrayed so well that discrepancies in the descriptions of technical developments do not detract from its value. Interesting and informative conclusions, and even predictions, are convincingly pointed up with statistics on the production, processing, and use of cotton. The human side of the cotton industry, with its poverty, heart-breaking disappointments, and wealth, is also well delineated . . . There are a few of the usual errors of processing and the index does no credit to such a learned work. The excellent illustrations are well reproduced . . . Well worth reading and should be a desirable addition to a library." *Earl E. Berkley.*

Crocker, William E. Growth of plants; twenty years research at Boyce Thompson Institute. 459p. 1948. Reinhold, New York, $10.

Food industries, June 1948, p.197. ⅛ col.

"Though the subject of this book is rather remote as a related study for the food processor, it is nevertheless of value to those who must look to plant life for their raw materials . . . Provides a critical summary of the basic researches carried on at the Boyce Thompson Institute for Plant Research, Yonkers, N. Y. Its chapters run the gamut of plant studies, from seeds and buds to such subjects as factors for color in the production of potato chips, and research on insecticides and fungicides."

Journal of chemical education, Aug. 1948, p.469. ¾ col.

"In this book, prospective scientists will find many of the human and scientific factors that determine the course of progress and that cannot be gleaned from the usual comprehensive treatments of specialized subjects." *Harold H. Strain.*

Journal of the Franklin Institute, Aug. 1948, p.180. ¾ p.

"Reports on the major and minor projects that have been conducted by the staff of the Boyce Thompson Institute since its foundation in 1924. Some of these projects are still being continued. The twelve major projects are described in the first eleven chapters, and the concluding twelfth chapter is devoted to the miscellaneous minor problems of plant research . . . Provides a convenient critical summary of articles which appeared in the past in the various pertinent publications, as well as those that have not been hitherto published . . . Should prove of considerable value to further research as well as to the fields of application." *H. N. Michael.*

Soil science, July 1948, p.79. ½ p.

"A unique book in that it deals with a series of special studies of plants and plant processes under conditions of rigid control . . . The illustrations are excellent. All workers in plant science will find great inspiration and much factual information in this highly important contribution to the literature in this field."

DeGraff, Herrell, & Haystead, Ladd. The business of farming. 244p. 1948. Univ. of Oklahoma Press, Faculty Exchange, Norman, Okla., $3.

Scientific monthly, Aug. 1948, p.136. 2⅛ col.

"The title of this book implies that a reader could expect to find most of the problems discussed that affect profits and losses in farming. This book does admirably on production phases. It briefs one almost equally as well on organization and reorganization of the income enterprises on a specific farm or area of land. It does not emphasize nearly so well the problems of credit, value of lands, first costs, hazards in owning property, debt repayment, and loss of property owing, not to inefficient management, but to error at time of purchase. One finds more than the usual proportion devoted to productive phases of the farm and less to farm management or ranch organization. Soil- and water-management problems hold the prima donna position whether it be on a 10-acre tract, 160-acre standard, or a 3-section wheat farm in the Plains." *Homer J. Henney.*

Dwiggins, W. A. Layout in advertising. Revised edition. 200p. c1948. Harper, New York, $3.50.

Printers' ink, July 16, 1948, p.74. ½ col.

"Mr. Dwiggins' text is individual and distinctive—and so are his startling views on words, type and pictures in advertising . . . About one-fifth of the beautiful little book is devoted to Apparatus and Product; the rest to Technique with interesting examples . . . of layouts for newspapers and periodicals, for eight varieties of direct advertising, for streetcar cards, window cards, billboards and signs, for packages, letterheads, labels, signatures and trade-marks. The marginal thumbnails are wonderful."

Elberfeld, John. Metallurgical materials and processes. 188p. 1948. Prentice-Hall, New York, $5 (Schools, $3.75).

Light metal age, Aug. 1948, p.34. ¼ col.

"Designed primarily as a student textbook. The condensation, question and summary makeup affords facile adaptability to classroom use. If not included in the curriculum, due to manner of presentation it is suitable for students specializing in other fields. A considerable amount of space is devoted to grain structure and constitution diagrams. Heat-treating furnaces and their controls, metal forming, welding, metallurgy, powder metallurgy and laboratory procedure are given attention. The Appendix serves as a reference guide, with its diagrammatic equations and compilations of elements' properties."

Elder, Albert L., and others. Textbook of chemistry. Revised edition. 758p. 1948. Harper, New York, $4.50.

Journal of chemical education, Sept. 1948, p.523. ¾ col.

"Planned for students who are interested in science, can solve problems in arithmetic, enjoy laboratory work, and have an inquiring mind . . . The revision is modern, clearly written, and arranged for those who desire theory before its application . . . Designed for science students and is unlikely to seem mere repetition to those who have had high-school chemistry. Nevertheless, it is complete for those who have had no previous course in chemistry, and comprehensive enough to need a full year's time for its study." *F. E. Brown.*

Evans, Ralph M. Introduction to color. 340p. 1948. Wiley, New York, $6.

Canadian chemistry and process industries, July 1948, p.657. ⅝ col.

"Covers the combined effects of the properties of colored light, the properties of vision, and the action of the mind in interpreting color. Those who work with color must know the subject from all these angles, and furthermore must understand the inter-relationships among these three aspects of color . . . Mr. Evans has written a completely non-mathematical text; further, he does not presuppose the reader to have a knowledge of either physics or psychology beyond the first principles. The book cannot, however, be considered as elementary in nature since all necessary concepts have been introduced, regardless of their difficulty. The author has written directly for the interested worker, no matter what may be his field of application."

Modern industry, Aug. 15, 1948, p.90. ½ col.

"To date, no book has covered the subject from so broad a viewpoint as *An Introduction to Color.* It will interest designers, engineers, makers of textiles and all other colored materials, as well as many more who work with color . . . With consistent terms and easily grasped text, the result is a trustworthy guide for all who need more than the bare fundamentals of a complex subject."

Oil, paint and drug reporter, Aug. 9, 1948, p.72. ½ col.

"Color is considered in this interesting book as a thing of physics, physiology, and psychology. The author . . . goes about his subject with coordinated consideration of the properties of colored light and those of vision, finishing off with the mental processes of color interpretation. He does it all comprehensively and competently in words which do not require a pastmastership in color terminology for their understanding. The mathematics and other physics of the text—reduced to a minimum—likewise do not demand higher education in those areas . . . A readable book, full of diagrams which really inform and pictures which make quite simple the important role [sic] of color in that field."

Evans, Ulick R. Introduction to metallic corrosion. 247p. 1948. E. Arnold, London, 12s. 6d.

Bulletin of the British Non-Ferrous Metals Research Association, July 1948, p.231. ¼ col.

"Primarily written to cover the needs of university teaching, and for physicists and chemists who are unfamiliar with the subject. There is however no doubt that those already working in the field of corrosion will benefit by reading this comprehensive and up-to-date review."

Journal of the Institute of Metals, Aug. 1948, *metallurgical abstracts,* p.624. ½ p.

"In spite of the many advances made in recent years in the field of metallic corrosion, no text-book giving an up-to-date, authoritative, general treatment has been available, and metallurgical teaching has suffered in consequence. Those whose daily work has brought them into contact with practical corrosion problems have also felt the need for a short book giving a general picture of the underlying scientific principles, and the present volume is therefore assured of an enthusiastic reception . . . Interest is retained throughout—a most desirable feature in a 'continuous reader'—and many will be tempted to ask for more by referring to the author's detailed 'Metallic Corrosion, Passivity, and Protection' . . . Well illustrated, and its price puts it within reach of all who are interested." *A. G. Quarrell.*

Nature, Aug. 28, 1948, p.316. 1⅓ col.

"Provides a general, authoritative and up-to-date survey of the subject, which the serious student should be able to master in the course of a few weeks . . . One attractive and likable feature . . . is that references to the literature are reduced to a minimum; even so, 165 are needed. These are segregated at the end instead of being given at footnotes . . . An attractive, well-written and well-produced book which will fulfil the purpose for which it is intended, and will undoubtedly appeal to a much wider circle of readers than the more comprehensive 'Metallic Corrosion, Passivity and Protection'. It is fully worthy of the author's high reputation." *J. C. Hudson.*

Faires, Virgil M. Elementary thermodynamics. Revised edition. 268p. 1948. Macmillan, New York, $4.40.

Industry and power, June 1948, p.112. ¼ col.

"Modifies and brings up-to-date a concise volume on thermodynamics. The most noteworthy addition is a short discussion on the theory of the gas turbine. This book was designed as textual material for short courses on the subject. Accordingly the author has shortened the text by omission of topics rather than shortening the explanations of the entire subject."

Fassett, F. G., jr., ed. Shipbuilding business in the United States of America. 2v. v.1, 313p.; v.2, 250p. 1948. Society of Naval Architects and Marine Engineers, New York, $12.50.

Journal of the American Society of Naval Engineers, Inc., Aug. 1948, p.406. 3⅓ p.

"Unique in that it is the first serious effort on the part of a major industry in the United States to set out in sequence and detail the procedures and practices which have resulted in the successful functioning of the industry as a part of the American economic system of free enterprise. The thirty authors whose contributions were co-ordinated and unified by the editor under the general direction of a control committee of Society members are all experts drawn from various portions of the industry, each selected for his recognized knowledge of and ability to discuss the certain phase allotted him of this widely ramified business of building ships. As a consequence, the volumes assemble authoritative discussions not only of the broad historical and economical aspects of a basic industry, but also detailed explanations and analyses of successful operating procedures, drawn from the experience of major shipyards from all the important shipbuilding centers of the country."

Motorship, Sept. 1948, p.65. ¾ col.

"Copiously illustrated with diagrams, figures, graphs, tables, and photographs, including a comprehensive series of plot plans showing the layout of many representative shipyards as well as many specimen illustrations of operating charts and tables used in the conduct of the business. The eighteen chapters making up the two volumes are carefully cross-referenced and interrelated, so that the complete work constitutes an integral unit . . . Will be of interest and value to students and management in many industries other than shipbuilding."

Fawcett, J. R. Measurement of fluid pressure. 42p. 1948. Emmott, Manchester, England, 2s. net. (Mechanical world monograph, no. 42.)

Iron and coal trades review, Aug. 13, 1948, p.361. ⅛ col.

"The author describes the construction and use of instruments for measuring pressures, from the lowest to the highest, met with in practice. Many problems connected with pressure measurement are dealt with, and several of the better-known instruments are described *in extenso* . . . Well illustrated and should provide a useful guide to engineers. One objection that might be made is to the persistent, and erroneous, use of the word 'vacuum' where a pressure below atmospheric pressure is meant."

Mechanical world, Aug. 6, 1948, p.152. ⅛ col.

"Describes the construction and use of instruments for measuring pressure from the lowest vacuua [sic] to the highest pressures found in practice. Many of the commoner problems met with are considered, and attention is drawn to the points to be watched when dealing with various fluids and the different methods of measuring pressure."

Forsythe, William E., & Adams, E. Q. Fluorescent and other gaseous discharge lamps. 271p. 1948. Rinehart, New York, $5. (Murray-Hill Bks.)

Proceedings of the I.R.E., Aug. 1948, p.1010. ¼ col.

"Causes of delays in development, and some of the developments that helped to make the present-day fluorescent lamp possible are related in this book. Many of the characteristics of the lamp and of its constituent parts are described, together with some of its advantages and disadvantages, all with attention to experimental laboratory results and helpful design and engineering data."

Fowler, Harlan D. Fowler flaps for airplanes; an engineering handbook. 90p. 1948. Wetzel, Los Angeles, $5.

American aviation, June 1, 1948, p.46. ¼ col.

"Aeronautical engineers should find much to interest them in this handbook on the Fowler flap . . . Mr. Fowler, who is an associate fellow of the Institute of Aeronautical Sciences, devotes this book to a comprehensive analysis and exposition of the principles and applications of the flap, together with numerous tables, photographs and engineering drawings . . . Should constitute a worthwhile addition to the library of any engineer."

Greenwood, Ivan A., jr., and others, ed. Electronic instruments. 721p. 1948. McGraw, New York, $9. (M.I.T. radiation laboratory series, v.21.)

Electrical world, July 31, 1948, p.154. ⅛ col.

"It should be understood that this . . . volume is not devoted to electronic voltmeters and various forms of industrial instruments. On the contrary it deals with analog computers, the instruments of servomechanisms, regulators of current and voltage and test devices for pulse equipment."

Product engineering, Sept. 1948, p.190, 192. ½ col.

"Covers four specific types of electronic instruments in four main subject divisions. The types of instruments are as follows: electronic analogue computers, instrument servomechanisms, voltage and current regulators, and pulse text equipment. Aside from being instruments, these units are all important adjuncts to many modern radar systems. It has been the object of the authors to present both theoretical background and practical details of these instruments as they were known to radar engineers. The authors feel that radar uses represent but a small area of the field of utility of these units. Information is presented in such form that it will serve as foundation upon which to build larger uses for these units."

Hall, David G. Blowflies of North America. 477p. 1948. Monumental Printing Co., Thomas Say Foundation, Entomological Soc. of America, Baltimore, $6.50.

American journal of public health, Aug. 1948, p.1163. 2 col.

"Health officers, physicians, sanitary engineers, food inspectors, veterinarians, entomologists, nurses, in fact all those in any way concerned with preventive medicine will welcome the appearance of this excellent monographic treatment of a group of insects so important from a medical and veterinary point of view . . . Every medical library should have this valuable publication and every worker in the field of preventive medicine will find it a useful working tool." *Fred C. Bishopp.*

Hallows, R. W. Television simply explained. 198p. Chapman & H., London, 9s. 6d.

Wireless world, July 1948, p.248. ⅜ col.

"While one may be doubtful if the complete ignoramus would really gain any understanding of television, it is certainly true to say that the book does give quite a detailed account of television in very simple language. Moreover, this detailed account is reached in very easy stages and unfamiliar terms are explained as they are introduced . . . An exceedingly good introduction to television . . . Much more suited to those knowing but little of wireless in any of its forms than to those who are familiar with wireless technique but lack a knowledge of the television branch." *W. T. C.*

Hammer, Bernard W. Dairy bacteriology. Ed.3. 593p. 1948. Wiley, New York, $6.

Journal of the Franklin Institute, Aug. 1948, p.179. 12 l.

"Presumes a knowledge of general bacteriology . . . Minor arrangements of material included in the earlier editions were made and new important developments have been added. The increased production of milk powder during the war, for instance, has presented many problems, the solution of which provided much useful material. There is an entirely new chapter on dairy-plant water supply, in which particular attention is paid to the spoilage that a deficient water supply may cause in milk products. Only special dairy laboratory methods are discussed." *H. N. Michael.*

Harrison, E. Heat convection from finned tubes. 43p. 1948. Emmott, Manchester, England, 2s. 6d. (Mechanical world monograph, no.46.)

Iron and coal trades review, Aug. 13, 1948, p.361. ⅝ col.

"The author . . . points out in his preface, the literature on the subject is extremely diffuse, and it is difficult to find suitable comparable experimental results in the solution of particular problems, especially in the case of extended surface heaters which are not generally regarded as amenable to calculation. The object of the present booklet . . . is to fill the gap by developing a method of applying more or less well-established data on convection heat transfer to the case of extended surfaces."

Mechanical world, Aug. 6, 1948, p.152. 9 l.

"Finned or extended surface heaters have not in the past been regarded as amenable to calculation. It has been difficult to correlate the various types and the tendency has been to regard each as unique and its performance unpredicable [sic]. However, in this Monograph the author applies more or less well established data to the case of extended surface, and develops formulæ and gives examples of their application."

Harry, Ralph G. Principles and practice of modern cosmetics. v.2: Cosmetic materials. 500p. 1948. L. Hill, London, 35s.

Journal of the American Oil Chemists' Society, Sept. 1948, p.35. ½ col.

"This authority has attempted to compile for the first time the dermatological aspects of the substances employed in pharmaceutical and toilet preparations . . . Where personal experience or published evidence of the effect of substances upon skin are not available, the author has endeavored to present a reasonable forecast of the dermatological action to be expected. The author hopes, through future issues of the book, to serve as a clearing house for the correlation of knowledge regarding dermatological action of substances in general on the skin . . . Some references are given; however, the reader, no doubt, will frequently wish more were available. The book would be of interest to the industrial and the research cosmetic chemist." *H. T. Spannuth.*

Manufacturing chemist and manufacturing perfumer, Aug. 1948, p.359. 1⅔ col.

"Mr. Harry has reduced to order the mass of mixed information scattered throughout technical and medical literature concerning the basic materials used in modern cosmetic formulation, supplemented by the fruits of his own extensive experience and experimental work. Substantially, the book consists of a series of monographs, alphabetically arranged, covering a comprehensive range of chemical and natural products from *Abracol* to zinc sulphate . . . Everything is done thoroughly and well . . . This book is quite first-class. Right up to date, well written, well printed, and concise, yet containing all the information needed. It will be widely used." *Frank Atkins.*

Hartman, Robert J. Colloid chemistry. Ed.2. 572p. 1947. Houghton, Boston, $6.50.

Chemical and engineering news, Sept. 6, 1948, p.2641. 1 col.

"Follows closely the organization of the first . . . [edition] which was published in 1939. Over 80 references have been added, and certain subjects, such as multilayer adsorption and light scattering, have been brought up to date. However, others in which revision was equally important have been neglected . . . The strongest features of this book appear to be, first, the treatments of classical colloidal subjects such as ultramicroscopy and the preparation of lyophobic colloids, and, second, the many interesting examples drawn from industry and everyday experience to illustrate colloidal phenomena." *John D. Ferry.*

Drug & cosmetic industry, Aug. 1948, p.243. ⅝ col.

"A serious effort has been made to preserve the scheme of presentation and organization of the first edition, which emphasized the principles upon which the more recent advances have been based. At the same time an attempt has been made to explain the more important new theoretical developments of these principles in colloid science and the other sciences which it serves. More than eighty references have been added and several sections have been either supplemented or re-written to include some of the more recent advances."

Hausman, Ethel Hinckley. Beginner's guide to wild flowers. 376p. 1948. Putnam, New York, $3.50.

Nature magazine, Aug.-Sept. 1948, p.341. 8 l.

"Covering more than one thousand species of wild flowers, this is a simple guide for the amateur student. It includes all except the rarest flowers found east of the Mississippi, and is useful as far west as the Rocky Mountains . . . Illustrated by 1000 individual line drawings of the flowers discussed."

Science education, Oct. 1948, p.291. ½ col.

"Over 1,075 illustrations are included in this complete beginner's guide, said to have 'more illustrations and descriptions than any other book for field use' . . . The author believes any beginner can easily and quickly find the name of any flower, without previous knowledge of botany . . . This would seem to be an unusually fine guide for elementary science teachers, general science teachers, the novice in flower identification, and even for the better trained high school biology teacher." *C. M. P.*

Hilton, B. Richard. Engineering machine shop practice. 189p. 1948. Pitman, London, 6s. net.

Mechanical world, July 16, 1948, p.61. ⅝ col.

"Constitutes a useful introduction to the field of machine shop work, being planned to guide the trainee by easy stages through all the phases of hand and machine work with their attendant processes . . . One factor of this book which distinguishes it from the general run of training handbooks is the greater importance accorded to lathe work, especially to the different types of tools now in general use, and to the methods employed in cutting various forms of screw threads. The section dealing with milling machines and milling operations is comprehensive . . . Good value at a very modest price, of handy size for the pocket or tool chest, this book should be purchased widely and consulted diligently by prospective production engineers." *E. S.*

Hopkins, Edward S. Water purification control. Ed.3. 189p. 1948. Williams & Wilkins Co., Baltimore, $4.

Chemical engineering, Aug. 1948, p.281. ½ col.

"The author has adhered to the original type of presentation, which clearly sets forth the major problems of the treatment of water for

municipal requirements and the present state of the art. The arrangement of the subject matter is particularly well organized and coordinated and the selective bibliography has been well chosen and should prove especially informative to students and operators of water treatment systems. The illustrations are well arranged and are helpful as an adjunct to the excellent description given in the text . . . An authoritative manual on water treatment appliances and their operation, and much practical advice has been presented which will be found helpful to all interested in the art of water treatment." *Sheppard T. Powell.*

Horwath, Ernest B., & Toth, Louis. Hotel accounting. Revised edition. 497p. 1948. Ronald, New York, $7.

Journal of accountancy, July 1948, p.75. ⅓ col.

"Reflects recent changes in requirements for recording sales of alcoholic beverages, federal and state unemployment insurance laws, treatment of depreciation, the uniform system of accounts proposed for hotels, and the compilation of statistical information. More than 100 specimen forms, illustrated in the text, have been brought up to date . . . An appendix contains the text of a booklet recently prepared by the authors, entitled 'Simplified System of Accounts for Small Hotels'."

New York certified public accountant, Aug. 1948, p.636. 1 col.

"Follows the original plan of presentation, and discusses procedures for a transient hotel of 350-400 rooms; however, modifications thereof for hotels of other sizes and types are also explained . . . Will appeal to experienced hotel accountants and auditors, as well as to other hotel personnel and students whose technical knowledge of accounting may be somewhat limited. The treatment of subject matter is authoritative and the style of presentation is clear and easily comprehended." *E. S.*

Industrial electronics reference book. 680p. 1948. Wiley, New York, $7.50.

Industrial Canada, Sept. 1948, p.188, 190. ⅔ col.

"Prepared by electronics engineers of the Westinghouse Company. The authors are men who by training and experience are competent to discuss the work in each specific field from a fundamental as well as from the applied point of view . . . Engineers and scientists interested in the design and use of research and production equipment will find this a very useful reference text." *J. O. Wilhelm.*

Radio maintenance, Sept. 1948, p.35. ½ col.

"A reference book to help the electrical engineer understand and apply new electronic equipment in industry . . . Includes within one cover all the technical data needed to understand the scope and limitations of electronic equipment as used in industry . . . Will be useful to engineers faced with the problems of approving or rejecting industrial electronic equipment. Besides presenting underlying theories and design factors, the book brings the electrical engineer up to date on developments in electronic instruments, motor control, dielectric heating of woods and plastics, resistance welding, X-ray and photo-electric devices and many other fields of electronics."

Jánossy, L. Cosmic rays. 424p. 1948. Oxford, New York, $10.

Physics today, July 1948, p.9. ½ col.

"The first complete treatise on cosmic rays to be published . . . A book on a difficult and intricate subject, prepared with care and competence by a man who has made for himself a prominent place among physicists for his original investigations in the field of which he writes . . . To a great extent, the imperfections noted are due to the difficulty of dealing with a subject which is still in a phase of rapid development. They do not detract from the value of the book, which everyone interested in cosmic rays will find very interesting and stimulating and which represents a source of extremely useful information." *Bruno Rossi.*

Kalmus, H. Simple experiments with insects. 132p. 1948. Heinemann, London, 7s. 6d.

Discovery, July 1948, p.232. ⅘ col.

"The subjects of insect physiology and behaviour form a highly specialised and rapidly extending field of knowledge, and one which has hitherto been summarised in a very few extremely advanced works such as those of Wigglesworth and of von Buddenbrock. There has not, however, been anything resembling a simple readable text-book for schoolchildren and their teachers, and for 'amateur' entomologists and naturalists . . . This book . . . very competently aims at filling this gap in the literature, and there are indeed few persons as well qualified to prepare such a work as the author has produced. One may in all sincerity praise this work as being all that it claims to be, and one may hail it as the first of its kind; such a work was really needed. There are a few minor faults which mar the book." *R. A. Davis.*

Kirschbaum, Emil. Distillation and rectification; translated from the German by M. Wulfinghoff. 426p. 1948. Chemical Pub., Brooklyn, $10.

India rubber journal, Sept. 11, 1948, p.14. ⅔ col.

"Written on strictly scientific lines, the author has avoided diving into specific technology, and confined himself to explaining and discussing (as regards plant typical of practical industry) principles, and such details as are necessary for elucidation of the subject . . . The excellent translation . . . is by M. Wulfinghoff, who has added a review of progress since publication of the original (about 1942). A foreword by the editor says: 'Kirschbaum's book may be regarded as a classic of the distillation and rectification industry. . . .' Omitting 'the' and 'industry,' the reviewer sees no reason to disagree with this opinion." *P. S.*

Oil and gas journal, Aug. 19, 1948, p.126. ⅛ col.

"Will aid the practicing engineer as well as the student because it presents the results of research together with engineering data in the field of distillation and rectification. The treatment is strictly scientific. Structural details of apparatus and other factors important to an engineer have also been considered. Instead of specific industries, principles and generally suitable designs have been stressed and the numerical and descriptive examples have been referred to the specialized industries. As far as possible, graphical methods have been used in preference to methods requiring involved calculations. The tables and graphs will be very helpful to those engaged in the petroleum, gas,

alcohol, solvents, rubber, drug, and other industries."

Petroleum processing, Sept. 1948, p.904, 906. ⅔ col.

"First edition in the English language of a book which has come to be regarded by many as an important aid to engineers in those industries which employ this kind of processing; for example, petroleum refining, gas liquefaction, solvent recovery, alcohol, and synthetic rubber. The book is a comprehensive treatment of this one type of processing and is valuable because of its thorough coverage of the equipment design involved. As far as is possible, the author has used graphical methods of presentation rather than complex calculations. Structural details of apparatus are considered. However, instead of specific industries, principles and suitable designs are emphasized."

Kobe, Kenneth A. Inorganic process industries. 371p. 1948. Macmillan, New York, $6.

Chemical engineering progress, Sept. 1948, p.40. ⅔ col.

"The author has written this book with a view to supplying the student with the basic information needed to understand from current periodicals what is occurring in the inorganic chemical industry . . . The book is amazingly replete with information for its size and is well illustrated." *R. A. Benzaquin.*

Oil, paint and drug reporter, Sept. 13, 1948, p.71. ⅜ col.

"Set forth as an attempt to supply chemical students with basic information preparatory to their understanding of current reports on the progress of the chemical industries. The author, being a teacher of chemical engineering, is naturally concerned more with the technical progress of the industries than with their commercial status and outlook. He aims at giving future production men a helpful idea of the ecologic areas in which they will find themselves corporally and must find and fit themselves operationally."

Petroleum processing, Sept. 1948, p.904. ⅓ col.

"Written primarily as a college text-book, its treatment of this phase of chemistry is easily read. Nine basic types of industries are covered —natural sodium and potassium salts, sodium carbonate, electrolytic caustic-chlorine, chamber and contact sulfuric acid, nitrogen fixation and nitrogen products, and phosphorus. Rather than being purely technical, the presentation is by the historical method with observations on the economic forces exerted by and through each particular phase of inorganic chemical processing."

Kröger, F. A. Some aspects of the luminescence of solids. 310p. 1948. Elsevier, New York, $5.50.

Bulletin of the British Non-Ferrous Metals Research Association, Aug. 1948, p.265. ¼ col.

"Based on experimental work carried out in the physical laboratory of the N. V. Philips Gloeilampenfabrieken, Eindhoven, Netherlands, during the last five years; it does not aim at giving a complete presentation of present knowledge regarding the phenomenon of luminescence in solids. Some unpublished experimental results and theoretical considerations are included . . . An appendix gives a comprehensive collection of data on the luminescence of different substances classified under the elements which activate them."

Chemical engineering, Sept. 1948, p.322, 324. ⅝ col.

"Dr. Kröger is to be commended for bringing a fresh approach to many complex problems, but further substantiation of some of his ideas by others will be necessary before this reviewer can accept them unconditionally. Of particular interest is a series of tables in which are compiled most of the reported inorganic luminescent materials together with original references to their preparation and properties. The extensive bibliography is extremely useful. Because of the narrow range of the field which is covered it is not recommended 'primer reading' of the subject, but it is 'must' reading for those engaged in phosphor research or preparation. The book reflects foreign printing; poor quality paper, considerable misspelling and occasionally stilted English." *Arthur L. Smith.*

Electrical review, Aug. 27, 1948, p.338. ⅔ col.

"Deals with the photoluminescence and to a lesser extent with cathodoluminescence of inorganic solids, but it should be emphasized that none of the technical applications or uses of these phenomena is considered . . . The difficulty of exactly reproducing a luminescent material is only too familiar; consequently results obtained by different workers are frequently at variance. It is therefore possible that much of the original work described by Kröger may not receive general acceptance . . . Contains much of interest for the reader who is already familiar with the more fundamental properties of phosphors, and the classification in the appendix should prove useful." *P. W. R.*

Laurence-Lord, F. The practical boot and shoe repairer. 2v. 522p. 1948. Library Press, Ltd., London, 67s. 6d. net.

Journal of the Society of Leather Trades' Chemists, Aug. 1948, p.290. ⅜ p.

"The author is well known as a writer on shoe repairing topics and on sole leather for the shoe repairer. He has endeavoured, with success, to cover every branch of the boot and shoe repairing trade, under hand and machinery conditions, from the selection of the leather to the finished repair. Much space has been devoted to the subject of sole leather including its tanning . . . The whole work is well produced . . . Printed in large type on excellent paper and well bound. The illustrations have been carefully selected and reproduced in a very good manner . . . Forms a splendid reference book for those who have any connection with the shoe repairing trade." *D. W.*

Lenihan, J. M. A. Text book of electronics. 211p. English Universities Press, London, 12s. 6d.

Electrical review, Aug. 13, 1948, p.244. ½ col.

"Intended for students in physics and electrical engineering and for workers in other fields who wish to obtain some knowledge of the properties and construction of the electronic devices with which they may come into contact. The level of writing seems in fact to be suitable for those who can understand simple technical discussion provided there is an almost complete absence of mathematics, and would most likely therefore prove too elementary for the first class of reader . . . The writing and descriptions are clear and concise, but unfortunately not free

from errors, some of which are very misleading." *V. J. F.*

Electrical times, July 22, 1948, p.104. ½ col.

"Unlike the majority of text books dealing with the fundamentals of electricity, this book departs from the conventional approach through magnetism to direct current and then on to alternating current . . . It is assumed that the reader has elementary knowledge of mathematics and physics and emphasis has been placed throughout on the physical laws rather than on the applications and special techniques developed from them."

Long, J. S., & Anderson, H. V. Chemical calculations. Ed.5, revised. 401p. 1948. McGraw, New York, $3.75.

Chemical products and chemical news, Sept. 1948, p.187. ⅝ col.

"It is always pleasant to welcome a new edition of an established and accepted book and in this volume the author has completely revised the original text and has given more detailed explanations in illustrative examples, with particular stress on the use of dimensional units . . . Well produced and will be welcomed in those circles where teachers of elementary chemistry wish to be pretty clear about definitions and dimensions." *H. T.*

Lord, F. Laurence-. See Laurence-Lord, F.

Lorig, C. H., & Adams, R. R. Copper as an alloying element in steel and cast iron. 213p. 1948. McGraw, New York, $3.

American foundryman, Aug. 1948, p.63. 1 col.

"Possibilities and limitations of copper as an alloying element in iron and steel are discussed, as are the commercially useful properties of copper-bearing ferrous alloys . . . The authors consider their book a resumé [sic] to bring the work of J. L. Gregory and B. N. Daniloff, *Alloys of Iron and Copper,* up to date. The bibliography of 102 references provides material for extensive further study of the subject."

Engineering and mining journal, July 1948, p.123. 9 l.

"A valuable reference handbook for the metallurgist, design engineer and others interested in technical information on copper as an alloying agent in iron and steel. Practical data on the properties, characteristics and applications of cast copper steels, wrought copper steels, copper cast iron and copper malleable iron are included."

Mines magazine, July 1948, p.40. ⅛ col.

"Presents the latest technical information on the use of copper as an alloying agent in iron and steel. Much of this information is in charts and tabular form, easily referred to. Practical data is [sic] contained on the properties, characteristics and applications of ferrous copper alloys. Corrosion resistance, constitution and structure, tensile strength, effect of heat treatment, and other qualities are summarized. The engineer and metallurgist will find this a valuable reference book to aid in the selection of alloys best suited to meet specific structural requirements."

Steel processing, Aug. 1948, p.447. 10 l.

"A valuable reference book for the metallurgist, design engineer and all others interested in technical information on the use of copper in iron and steel . . . Contains pertinent information on ferrous materials containing small amounts of copper, as well as recent advances in the metallurgy of copper bearing steels. Practical data on the properties, characteristics and applications of cast copper steels, wrought copper steels, copper cast iron and copper malleable iron are included."

Lyman, Rufus A., ed. American pharmacy. v.2. 379p. 1947. Lippincott, Philadelphia, $6.

Drug topics, Aug. 30, 1948, p.18. ⅖ col.

"Embraces many subjects which have not been available in accessible reference form. What makes Volume Two so highly interesting is the fact that it is devoted to advanced pharmacy, medical, surgical, dental and health supplies, and animal health pharmacy . . . It is a fitting companion to Volume One, which deals with fundamental principles and practices, pharmaceutical preparations, and other foundation subjects . . . Will appeal to the retail pharmacist, as it deals with the handling and dispensing of a vast number of medical, surgical, dietary and health supplies. Because of the range of topics covered, Volume Two should be most helpful as a handy reference not only for the pharmacist, but also for pharmacy students."

McIlroy, Robert J. Chemistry of the polysaccharides. 116p. E. Arnold, London, 10s. 6d.

Industrial chemist and chemical manufacturer, Aug. 1948, p.559. 1⅛ col.

"A resumé [sic] of modern developments in the field of carbohydrate chemistry, with particular reference to the polysaccharides . . . Written primarily for teachers, honours students, research workers and biochemists, to all of whom it will be most welcome . . . Extremely clearly and well set out, and no word is wasted, which will make it particularly attractive to students. In fact, extensive condensation has been necessary to keep the work small enough for it to be produced at a price within the means of most students. The skill with which this has been carried out, combined with the very comprehensive lists of references given at the end of each chapter, shows the clear understanding that the author has of the best presentation for students. The information . . . will, however, be of no less value to the theorist and the practical worker in this field, and the biochemists will appreciate particularly the details of methods of estimation of carbohydrates in biological material." *W. O. Walder.*

MacNaughton, Edgar. Elementary steam power engineering. Ed.3, revised and reset. 640p. 1948. Wiley, New York, $6.50.

Combustion, July 1948, p.48. ¼ col.

"The general presentation resembles that of most textbooks, except that there is some departure from the usual sequence of topics by having the practical discussion precede the theoretical; and the text is more profusely illustrated. Each chapter is followed by a number of carefully selected problems. Major changes . . . include ASA symbols and abbreviations, abridgment of the latest steam tables, rewriting of much of the text to accord with advancing practice, and the inclusion of additional material, especially on thermodynamic principles and on turbines."

Heating and ventilating, Aug. 1948, p.113. ⅜ col.

"Practical applications and concise presentation of fundamental principles underlying the construction and operation of steam power plants and equipment are embodied . . . While intended for men of college grade, the mathematical discussion was made sufficiently simple to make the text suitable for the general reader. Practical applications are presented before the theory is discussed . . . The book has been reset, obsolete material has been removed, and new material and illustrations have been added."

Industry and power, Aug. 1948, p.108. ⅓ col.

"Major revisions include adaption of symbols and abbreviations as recommended by the American Standards Association, use of the latest steam tables by Keenan and Keyes, the collection of thermodynamic principles into a single chapter to follow the chapter on physical units, placing oil gas and pulverized fuel burning into a single chapter, placing stokers in another, completely rewriting of the chapter on steam turbines, addition of descriptive data on recent power stations, the inclusion of a list of general references for further reading, and others."

Madison, Richard D., ed. Fan engineering. Ed.5, revised. 808p. 1948. Buffalo Forge Co., 152 Mortimer St., Buffalo, N. Y., $6.

Food industries, Aug. 1948, p.187. 12 l.

"This handbook has been growing in size and value through the years until now it is recognized as the 'bible' of its industry . . . Gives greater coverage to air conditioning, particularly engineering data, than did its predecessors. The . . . four parts respectively treat: Physics of Air, Fans, Fan Applications, and Fans and Air Conditioning Equipment . . . Should be useful in the food plant as well as the laboratory."

Industrial hygiene digest, Aug. 1948, p.7. ⅓ col.

"All the major sections have been enlarged and numerous explanatory problems aid the reader. Industrial hygienists will be attracted to the new concise discussions on air velocity measuring devices, throw of air from slots and openings, hood design, dust determination, and new data on orifice plates. Many additional codes and standards have been listed governing specific operations. This handbook remains a standard work in the field of ventilation, of valuable use to all engineers, and the latest edition renews the respect which it earned when first published in 1914." *H. M. C.*

Industry and power, July 1948, p.120, 122. ⅓ col.

"A complete handbook on air, its movement and distribution in air conditioning, combustion, conveying, and other applications employing fans . . . Contains all the data, formulae, and tables needed by the consulting and plant engineer to design and lay out practically any installation . . . So complete and contains so much of principles and of engineering data that it is valuable in the class room as well as in the engineering office."

Textile world, July 1948, p.240. ⅓ col.

"Expanded coverage of air-conditioning equipment is given and charts and tables have been revised to take into account changes effected since 1938, the date of the last previous edition. Formulas, discussion, and graphs give to the designer or user of fan applications the latest in air-engineering applications."

Marklew, H. M., & Collier, J. A. Protective methods for a.c. power circuits and machines. 142p. Blackie, London, 10s. (Blackie's electrical engineering series.)

Electrical times, Aug. 12, 1948, p.184. ⅓ col.

"Presents the principles of protection in a form suitable for students and engineers who have no specialised knowledge of the equipment concerned. The range covered is wide, and includes not only generation, transmission and distribution, but also the protection of consumers' apparatus. Although practical protective systems are complex, making a detailed study impracticable, a wide field has been covered by considering only the general principles and basic circuits."

Electrician, Sept. 3, 1948, p.718. 1⅓ col.

"The authors deserve special commendation for the very clear exposition of principles involved in various methods of protection. Although the book is comparatively small and inexpensive, the survey of protective methods is comprehensive, though some sections are necessarily very brief. Frequent reference is made to British Standard Specification, especially as regards definitions of terms, and a bibliography contains a useful list of I.E.E. papers, articles and books . . . In spite of the few errors . . . this is a most useful and interesting volume." *T. A. L.*

Engineering, Sept. 3, 1948, p.239. ⅓ col.

"Deals in a clear way with principles and basic circuit arrangements, the fundamentals of the design of relay transformers, various types of protective relays, and special applications . . . There is also a chapter on fuses, which are frequently omitted from treatises on protective apparatus, and a short section, in fairly general terms, covering the question of fire protection. Although the value of this book to students has been emphasised, it is likely to prove equally useful to many engineers engaged in practice."

Menzel, Donald H. Elementary manual of radio propagation. 220p. 1948. Prentice-Hall, New York, $7.65.

Proceedings of the I.R.E., Aug. 1948, p.1009. ⅓ col.

"Presents graphic methods that enable rapid calculation of field strength for various conditions of distance, time, frequency, geographic locations, and topography . . . Should be of particular value to those concerned with the choice of frequencies and evaluation of power requirements for various radio communications services." *Harold O. Peterson.*

Miller, Benjamin F. You and your doctor. 183p. 1948. McGraw, New York, $2.75. (Whittlesey House publication.)

American journal of nursing, Aug. 1948, p.38, 40. 1½ col.

"A one hundred and eighty page propaganda tract 'aroarin'' for national compulsory health insurance and for all the government paternalisms which collectively go under the heading of socialized medicine. It is a book full of errors in fact, of fallacious deductions, of naive [sic] assumptions, of starry-eyed prophecies, and of just plain silliness." *Iago Galdston.*

Scientific monthly, Aug. 1948, p.140. ⅔ col.

"The author . . . has given us an unusually

readable book on a subject of vital concern to all. Attention is focused on the current major questions of medical care . . . There can be no doubt that, in this simply told yet informative and provocative book, the author has made a notable attempt to acquaint the layman with the point of view of one important school of medical thought on ways and means of attaining optimum national health." *M. S. Goldstein.*

Montgomery, C. G. See Smullin, L. D., & Montgomery, C. G., ed.

Moon, Parry, & Spencer, D. E. Lighting design. 482p. 1948. Addison-Wesley Press, Cambridge, Mass., $5.

Electrical construction and maintenance, Sept. 1948, p.190. ⅘ col.

"Two main objectives; the presentation of lighting principles in a quantitative manner which will augment normal descriptive text, and the outlining of a comprehensive design method for devising high-quality lighting systems; are achieved in . . . [this] book written for both students and practicing engineers . . . It should be clearly understood that this is not an elementary discussion of methods or materials used for fundamental lighting design. It is a learned, advanced text book for those who seek to apply proven theory to every-day practice."

Product engineering, Sept. 1948, p.192. ⅔ col.

"Prepared with the intention of following two aims: (1) To provide a textbook on lighting, which would present fundamental principles in a quantitative manner—giving more than description—and (2) to present a comprehensive design method that can be used by practicing engineers in devising lighting systems for rooms . . . Subject matter is divided into 11 chapters covering light theory, materials, lighting units available and all factors met in the design of the systems. At end of each chapter appear summary, illustrative problems, bibliography and all tables for material covered in the chapter. Meter-kilogram-second units are used throughout the book."

Moreno, Theodore. Microwave transmission design data. 248p. 1948. McGraw, New York, $4.

Electronics, Aug. 1948, p.216, 218. ¾ col.

"Practical design data for microwave transmission components are presented . . . A revision and expansion of an earlier Confidential volume of the same name published by Sperry Gyroscope Co. during the war. Although . . . only thirty pages longer than the original volume, it actually contains a much greater proportion of new material inasmuch as the illustrations and graphs have been reduced to from one-half to one-quarter size. Although the curves are not as easy to read and in many cases the fine calibration lines have been omitted, they are still adequate. The illustrations themselves have lost nothing in the reduction . . . The usefulness of this volume, like its predecessor, lies in the great abundance of curves and equations leading to actual dimensions and construction data for microwave components." *Nathan Marchand.*

Physics today, Sept. 1948, p.35. ⅓ col. including another review.

"Should be a help to anyone who wants to use transmission lines or wave guides. The novice will find fundamental quantities explained in simple terms, and concrete examples of use of the Smith chart and of impedance matching. The better informed will need the tables covering discontinuities, bends, dielectrics in wave guides, and loss in conductors and dielectrics. A brief chapter on resonators contains useful design data." *J. R. Pierce.*

Radio maintenance, July 1948, p.30. ⅓ col.

"A practical handbook of specific design data for the use of engineers engaged in the design of microwave equipment of all kinds . . . Discusses transmission line theory from the high frequency point of view, coaxial lines and transmission line structure, hollow pipe wave guides, properties of dielectrics at high frequency, cavity resonators, etc. Emphasis throughout is on the practical applications of this [sic] data in design and construction work."

Morse, Philip M. Vibration and sound. Ed.2, revised. 468p. 1948. McGraw, New York, $5.50.

Electronics, Sept. 1948, p.226, 228. 1⅓ col.

"The author has continued the objective of the first edition, namely, a thorough treatment of the theory of vibration and sound for students in physics and communication engineering. In attaining these aims the author has provided an adequate and complete treatment of the mathematical foundations of conventional sound theory which forms the basis for the solution of the specific problems . . . The subject matter is confined for the most part to types of vibrations that can be handled mathematically. It is not, however, a book on mathematics with sound as an excuse. Mathematics is used as a tool. Sufficient explanation is given for the most part to keep the physical concepts and significance of the formulas clear . . . A valuable addition to the literature in acoustics, particularly to the serious student and investigator." *Harry F. Olson.*

Journal of applied physics, Aug. 1948, p.800. 1⅔ col.

"A masterful revision of a book that already has won its place as an outstanding contribution to the literature of acoustics . . . An outstanding feature . . . is the application of mathematical methods hitherto not generally used on acoustical problems . . . Perhaps the most outstanding contribution . . . is the chapter dealing with room acoustics . . . There is no question that this book will long occupy a central position for workers in acoustics." *Robert S. Shankland.*

Product engineering, Sept. 1948, p.184. ⅝ col.

"Admittedly, the book is aimed at the physics and communications engineering student. But there is no doubt that buyers of domestic and industrial equipment are becoming more noise conscious. Design engineers who are faced with acoustic problems will find this book gives them excellent theoretical background."

Mueller, George V. Introduction to electrical engineering. Ed.2. 591p. 1948. McGraw, New York, 30s. net.

Electrician, July 23, 1948, p.265. ⅔ col.

"Although the scope of the book may not appear wide, the treatment is very thorough and well suited to the needs of students commencing a university course in electrical engineering. Further commendable points about the book are a proper explanation of the physical meaning of the various phenomena, full use of mathematics in order to give a rigorous

treatment, a clear and readable style with references to practical applications where appropriate and the use of the m.k.s. system of units. Numerical examples are interspersed throughout the text and over 600 questions are included, although answers to these are not given. We strongly recommend the book as one which can give a very sure foundation upon which to build a sound knowledge of electrical engineering." *E. O. T.*

Murdock, L. J. Concrete materials and practice. 328p. 1948. E. Arnold, London, 21s.

Concrete and constructional engineering, Aug. 1948, p.248. ⅓ col.

"As is usual in books on this subject, chapters on materials, mixing, placing, curing, and surface finishes are followed by chapters on shuttering, reinforcement, notes on different types of construction, precast concrete, and other aspects of concrete work. Many of the 224 illustrations are familiar to students of books on concrete . . . Can be recommended to those who require a book on concrete construction, particularly in relation to large works where what the author calls the 'science' of concrete making can be practised."

Myer, John N. Accounting technique. 308p. 1948. The Author, City College of New York, New York, $4.

New York certified public accountant, Aug. 1948, p.635. 2 col.

"Clear, readable, and concise . . . In spite of its size, the major elements of the customary course are treated and, for the most part, adequately . . . Among those non-practitioners for whom this brief course was written, Professor Myer includes 'engineers, lawyers, economists, statisticians, credit men, investors, business executives, and persons preparing themselves for such professions. It is also suitable for use as a refresher by those who have already studied accounting,' he suggests. The reviewer is not in complete agreement with the thought of the use of this text for non-practitioners . . . For instructors who have considerable supplementary material of their own to present and who want a concise text to use as a keystone, 'Accounting Technique' should serve well. It should also be of interest for a briefer introductory course for accountants, for use in a short course for business men, or perhaps as a text in a course in the area of adult education." *Daniel Lipsky.*

Oosting, Henry J. Study of plant communities. 389p. 1948. W. H. Freeman & Co., San Francisco, $4.50.

Nature, Sept. 11, 1948, p.387. 1½ col.

"Covers fairly adequately the subject of plant communities or synecology as an introduction to a part of plant ecology. After a preliminary discussion on the subject-matter of ecology there are five parts, with a total of eleven chapters, dealing with the plant community, factors controlling the community (the environment), community dynamics and practical considerations . . . Terminology is introduced gradually in the text and nowhere overwhelms the reader. Divergent points of view are judiciously treated . . . A general criticism . . . is the relative neglect of non-American investigations. One would naturally expect emphasis to be given to American work and examples to be chosen largely from North American vegetation; but more consideration of various methods of study, both of vegetation itself and of the factors of the environment, which have been developed in Europe and elsewhere would have added greatly to the value of the first half of the book. It is also unfortunate that, in common with many other text-books of ecology, the dependence of good ecological work on the correct determination of the organisms composing the communities studied is not stressed." *W. B. Turrill.*

Soil science, Aug. 1948, p.163. 9 l.

"This introduction to plant ecology considers first the nature of the several plant communities and the methods by which they can be distinguished from one another. The factors that limit or modify these communities are then discussed. The methods of study employed in plant ecology are well presented. The illustrations are exceptionally good and well chosen. The last chapter is especially interesting in that it offers an applied ecological approach to the solution of the problems of soil conservation. A list of 276 cited references is appended . . . Merits a wide reading and will be found very useful for reference purposes."

Owen, Halsey F. Introduction to tool engineering. 150p. Prentice-Hall, New York, $3.60.

American machinist, Sept. 23, 1948, p.188. ⅜ col.

"Starting from categorical explanations and definitions of manufacturing methods and machine tools, the author builds a background of industrial information that is valuable to both students and experienced engineers. Shop practices and routing are examined, and methods of designing for production of varying rates are taken up. Other chapters are concerned with tool design, manufacturing costs and economics, and selecting the best tools and manufacturing methods for the individual case. Although . . . primarily a text for student engineers, it may be read by shop men to obtain an understanding of how tooling must be set up to produce most economically."

Product engineering, Sept. 1948, p.188. ½ col.

"An excellent presentation of tool engineering fundamentals. Dealing specifically with the problems confronting the production engineer striving for economical, interchangeable mass production manufacture, this text will be of value to both technical students and engineers in the design and production fields . . . Illustrated with photographs, line drawings and sample forms. Problems included at the end of each chapter permit its use as a reference for classroom work."

Pierce, J. A., and others, ed. Loran; long range navigation. 476p. 1948. McGraw, New York, $6. (M.I.T. radiation laboratory series, v.4.)

Electronics, July 1948, p.204. 1⅛ col.

"The preface states that the purpose of the book is to describe the Loran system, its principles and its equipment as they existed at the end of the war and to offer suggestions for their adaptation and improvement for civilian services in time of peace. It is the reviewer's opinion that 'Loran' has achieved admirably the purpose for which it was written, and constitutes an outstanding book in the Radiation Laboratory Series." *P. C. Sandretto.*

Journal of the Franklin Institute, Aug. 1948, p.176. ⅝ p.

"Commences with a brief comparison of Loran with other methods of navigation by means of radio aids. A historical chapter gives details of its development from the first proposal in October, 1940, through the various experimental stages to its practical operation . . . The principles of Loran are thoroughly treated . . . Part II is devoted to Loran equipment . . . An appendix gives the Loran program in the Hydrographic Office, a list of Loran ground stations and other data. The bibliography is comprehensive and provides a helpful indication of where material may be secured, especially necessary because of the nature of much of the material cited . . . Well serves its purpose of recording the development of Loran and until significant changes occur, will undoubtedly remain the standard work on the subject." *G. E. Pettengill.*

Proceedings of the I.R.E., Sept. 1948, p.1141. ½ col.

"Describes the Loran system and the history of its development. Very few portions require more than an elementary knowledge of radio transmitters, receivers, and pulse techniques to be properly understood. Even though eleven authors contributed, the text appears to have an integrated continuity . . . The 12-page bibliography will enable a reader interested in further detail to obtain more information." *Stuart W. Seeley.*

Ragan, George L., ed. Microwave transmission circuits. 725p. 1948. McGraw, New York, $8.50. (M.I.T. radiation laboratory series, v.9.)

Physics today, Sept. 1948, p.35. ⅓ col. including another review.

"Seems chiefly valuable in presenting extensive measurements on such elements as discontinuities, transducers, branches, chokes, and switches. There is, however, a good stiff section on the theory and design of microwave filters. One of three 'fundamental things' concerning waves cited in the first chapter, 'the fact that in any electromagnetic wave the electric field and the magnetic field are always orthogonal' just is not so." *J. R. Pierce.*

Ralston, A. W. Fatty acids and their derivatives. 986p. 1948. Wiley, New York, $10.

Chemical and engineering news, Aug. 9, 1948, p.2386. 1 col.

"Another excellent contribution has been made to the armamentarium of reference texts on fatty acids . . . The subject matter is presented in a logical and interesting fashion . . . For the first time, to the knowledge of the reviewer, the information on fatty-acid derivatives has been brought together in one place and discussed in an orderly fashion . . . Will serve as an excellent supplementary reference text in research in the field of fat and oil chemistry. Incidentally, it is worth while to mention that the book is printed on excellent paper and in type easy to read." *B. F. Daubert.*

Chemical engineering, July 1948, p.283. ⅔ col.

"Brings together in very readable form a wealth of literature and original work . . . As one would expect, there is comparatively little fatty acid technology treated in this volume. The chemical engineers will find it of great reference value, however, from the standpoint of the fundamental chemistry on which present and future technology must be based. Charts and tables illustrate the book to a limited extent. In all cases the material seems well presented and the book is mechanically satisfactory." *Gordon W. McBride.*

Chemical industries, Aug. 1948, p.300. ⅔ col.

"Recommended to all institutions and individuals interested in fatty acid derivatives as a valuable source of references and as a supplement to other outstanding books recently published on the topic of fatty oils and fatty acids." *H. G. Kirschenbauer.*

Journal of the Franklin Institute, Sept. 1948, p.258. ⅔ p.

"Dr. Ralston . . . has written in this volume an excellent comprehensive treatise on the chemistry of the fatty acids and their derivatives . . . The viewpoint of the book is academic and fundamental rather than industrial and technological . . . The graphs, tables and figures are well done . . . An authoritative and thorough summary of our present knowledge on the subjects discussed. Over 5000 references to original publications are given . . . Highly recommended to those who may be interested in the subject . . . Should be widely used as a reference." *R. C. Merrill.*

Rawlings, Arthur L. Science of clocks and watches. Ed.2. 303p. 1948. Pitman, London, $5.

American horologist and jeweler, July 1948, p.83. ⅔ col.

"Up-to-date and includes such new subjects of study as the crystal clock, the synchronous electric clock, the Hamilton marine chronometer, and others. Although Dr. Rawlings writes in a clear, effortless style, his book is not for the layman since it is primarily a text on physics. However, it proves interesting and easy to follow if the reader has even an elementary knowledge of the subject of physics . . . We recommend this book to anyone who requires to 'know the reason why.' Such persons are certain to find a great many of the answers in this material. It is also a must for any library, private or public, which includes a section on timekeeping."

Riley, Herbert Parkes. Introduction to genetics and cytogenetics. 596p. 1948. Wiley, New York, $5.

Journal of forestry, Aug. 1948, p.617. 2 col.

"Presents much material, such as the discussions of human inheritance, that will be of interest to the layman. However, it is primarily a text written for use by the student and the teacher . . . Illustrated with 154 figures, 53 of which are photographs or photomicrographs. The photographs and drawings are excellent in quality and were apparently selected or prepared with care . . . A complete preparation for an understanding of current theory and research work in the field. The arrangement is logical, the subject being developed from the simple to the complex . . . Can be recommended as suitable for college students and for the teacher's shelf . . . A worthwhile contribution to the literature on the subject." *Palmer Stockwell.*

Rosenfeld, Léon. Nuclear forces. 205p. 1948. Interscience Publishers, New York,

$5. (Monographs on theoretical and applied physics, pt.1.)

General Electric review, Sept. 1948, p.54. ⅓ col.

"The main line of argument of the book is theoretical, but it is salted with critical discussions of experimental results and techniques. The point of view is that of the famous series by Bethe and Bacher in *Reviews of Modern Physics,* and the present work may be regarded as an effort to bring that classic up to date. This volume begins with a semiqualitative discussion of nuclear forces in relation to nuclear radii and mass defects, and the major portion of the book is devoted to a very detailed discussion of the neutron-proton system and of proton-proton scattering . . . An unfortunate feature . . . is that the bibliography and the index, plus a number of illustrations and tables referred to frequently in the text, have been relegated to the second volume, which is not yet available." *Harvey Brooks.*

Physics today, July 1948, p.9, 29. ⅔ col.

"A thorough, detailed, critical survey of the present status of nuclear theory in the manner of Bethe and Bacher is greatly to be desired. Professor Rosenfeld has done us all a great service by performing this difficult task clearly, ably, and with great care for the two- and three-body problem in nuclear theory . . . Contains Part I, 'General Features of Nuclear Forces,' and Part II, 'Two nucleon systems on the hypothesis of central interactions' . . . The index, the references, and the appendices to which the first volume refers have been placed in the second volume." *Herman Feshbach.*

Salle, A. J. Fundamental principles of bacteriology. Ed.3, revised and rewritten. 730p. 1948. McGraw, New York, $6.

Food industries, Aug. 1948, p.187. 12 l.

"With its material . . . brought up to date, the book remains a standard text. Fundamentals are stressed and emphasis is placed upon the importance of chemistry in gaining a clearer understanding of the composition of bacteria and the reactions they produce."

Manufacturing chemist and manufacturing perfumer, Aug. 1948, p.361. ⅔ col.

"The author deals with moulds, yeasts and viruses as well as with bacteria. The morphology, classification, and technique of handling micro-organisms occupies some half-dozen chapters, and their physiology and biochemistry a further half-dozen. Applied bacteriology is dealt with mainly in relation to the micro-organisms of air, water and milk products, with a chapter on infection and immunity, and a comprehensive summary of the bacterial and virus diseases of man . . . A reference book that should be in the hands of all who are interested in micro-organisms." *L. D. Galloway.*

Scheer, Bradley T. Comparative physiology. 563p. 1948. Wiley, New York, $6.

American journal of public health, Aug. 1948, p.1167. ¾ col.

"Intended for use in an advanced university course in comparative physiology . . . The book represents a departure from previous texts in comparative physiology in that each chapter takes up the functional systems in a definite order for a single phylum. This arrangement makes it possible to compare functions in closely related organisms. A summary at the end of each chapter stresses the evolution in function within the phylum and the relations to other phyla . . . The great wealth of material presented and the arrangement of the material should attract the interest of physiologists and advanced students in zoölogy." *C. W. Hampel.*

Sears, Francis W., & Zemansky, M. W. College physics. pt.2: Electricity, magnetism, and optics. 463p. 1948. Addison-Wesley Press, Cambridge, Mass., $3.50.

American journal of science, July 1948, p.453. ⅜ p.

"Includes the same commendable features found in Part 1; an interesting style, excellent illustrations, numerous numerical problems, worked examples, and an emphasis on fundamentals. The two volumes together constitute a full-year course for first-year college students whose mathematical preparation goes no further than simple trigonometry. The entire work is also available in a single binding . . . Indeed a very satisfying text for the first-year college physics course." *W. W. Watson.*

Product engineering, Aug. 1948, p.182. ⅛ col.

"Second and final part of a textbook on physics, this volume includes the subjects of electricity, magnetism, optics, and atomic physics. Mathematical preparation beyond algebra and trigonometry is not required of the student. Although the mathematical approach is elementary, the subjects are well interpreted. The section on optics, in particular, the chapters on interference, diffraction, and polarization are admirable for their clarity and completeness of treatment."

Severns, William H., & Degler, H. E. Steam, air and gas power. Ed.4, revised. 509p. 1948. Wiley, New York, $4.75.

Industry and power, July 1948, p.120. ⅓ col.

"Material of immediate and growing importance on steam, air and gas power is highlighted in this fourth edition called 'the best single volume on heat-power engineering.' The authors present the latest basic information on the subject combining theory with the operation of typical modern equipment in use today. New material on the gas turbine and other recent developments have been added."

Steel processing, July 1948, p.387. ⅓ col.

"Provides an up-to-date elementary textbook in heat-power engineering for engineering courses where time limitations prevent a more exhaustive coverage of thermodynamics and its applications . . . Provides a valuable tool for those beginners not equipped for the more rigorous theory or those engineers whose exposure to heat-power engineering consisted of a one semester course some twenty to thirty years ago and who would like a modern review of the subject based on present day practice and equipment."

Shand, Samuel James. Eruptive rocks; their genesis, composition, classification, and their relation to ore-deposits with a chapter on meteorites. Ed.3, revised. 488p. 1947. Wiley, New York, $7.50.

American mineralogist, July-Aug. 1948, p.517. ⅔ p.

"The presentation is concise, the descriptions are clear, the arguments are fair and the conclusions generally convincing . . . The best book in English and probably in any language on modern igneous petrology . . . An excellent textbook and should be interesting and profitable

reading for anyone who is interested in petrology." *Esper S. Larsen, jr.*

Economic geology, Aug. 1948, p.430. ½ p.

"The chapter on 'Eruptive Ore Deposits,' omitted from the last edition, is reinstated in revised form and three entirely new chapters have been added . . . These three chapters will be welcome particularly by economic geologists. Much new matter has been introduced throughout and other chapters and several new illustrations have been added and considerable rearrangement of topic matter has taken place . . . The general concept contained in a paper by the author published in the American Journal of Science in 1944 in regard to petrologic procedures and problems is generally followed throughout this book and the writer has followed still further his own procedures, terminology and nomenclature . . . Will be of interest to all advanced students of petrology."

Journal of the Franklin Institute, Sept. 1948, p.262: ½ p.

"As in the previous editions of this pioneering work, Professor Shand bases his concept of rock types on the chemistry of silicate systems, and thus continues his fight for the abolishment of the 'jungle of rock names' which often cripples the perspective of the student . . . Written for the advanced worker. Its third edition introduces much new material in nearly every chapter and is conveniently divided into two parts . . . Numerous references are appended to each chapter." *H. N. Michael.*

Shepard, William P., and others. Essentials of public health. Lippincott, Philadelphia, $5.

Hospital management, Aug. 1948, p.60, 62. 3¼ col.

"Fulfills a long-felt need in that it offers, in simple terms, a complete overall picture of the public health field. Here we find the whys and wherefores of public health from sanitation to statistics. Here the impact of this great undertaking is made to be felt by all those engaged in the prevention and cure of disease . . . Having set out to write a book for all people interested in public health, the authors have succeeded nobly . . . Highly recommended to physicians, hospital executives, nurses, and others who wish fuller participation in this great democratic movement toward better health for all people." *Kenneth A. Brent.*

Shoemaker, James S. Small-fruit culture; a text for instruction and reference work and a guide for field practice. Ed.2, revised. 433p. 1948. Blakiston, Philadelphia, $4.

Science, Sept. 10, 1948, p.290. ⅔ col.

"The most up-to-date and complete text relative to the culture of these fruits which is available at present. Although it does not include all of the information that is pertinent to a specific locality, it does give a well-rounded view of the practical aspects of the industry as a whole and, as such, is a valuable textbook for a 'general' course in small fruits . . . The crops discussed . . . are grapes, strawberries, brambles, currants, gooseberries, blueberries, and cranberries, three-fourths of the book being devoted to the first three fruits listed." *Franklin A. Gilbert.*

Smith, F. J., & Jones, Emlyn. A scheme of qualitative organic analysis. 320p. 1948. Blackie, London, 17s. 6d. net.

Chemical age, July 3, 1948, p.22. ⅛ col.

"Can be recommended for special study and . . . intended . . . for the ordinary and higher national certificates in chemistry, the associateship and fellowship of the Royal Institute of Chemistry, and London B.Sc. degrees . . . The book seems likely to become recognised as part of the regular equipment of the organic laboratory."

Smith, Walter H. B. Small arms of the world; the basic manual of military small arms. Ed.4, revised and enlarged. 500p. 1948. Military Service, Harrisburg, Pa., $6.

Ordnance, Sept.-Oct. 1948, p.136. ¼ col.

"Of value to the student, collector, dealer, arms analyst, Reserve officer and just plain gun bug. Its simply presented text and nearly 600 photographs and drawings show how to load, operate, and field-strip 150 rifles, handguns, and machine guns of twenty-five nations. Sections on identification, proof marks, manufacturer's codes, and comparison of foreign and American ammunition are unusually thorough. Smith's comments are entirely free from bias. The marked excellence of many foreign small arms will come as a shock to many an American reader." *F. W. F. Gleason.*

Smith, Woodrow. Antenna manual. 306p. 1948. Editors & Engineers, Santa Barbara, Calif., $3.50.

CQ, Oct. 1948, p.62, 80. ½ col.

"There can be little doubt that there is a need in the amateur radio field for a useful composite text on antenna performance, operation and construction. The *Antenna Manual* seems to fall short of this goal because of the desire to be considered an authority in the whole field of radio communication. Had this book been held strictly to the vertical field of amateur radio it would have probably fulfilled the needs of the average ham. Instead, it is rather thinly spread over the fields of broadcasting, FM, television, and even T/R switching. The result is a slightly inadequate coverage in all fields, although the book and the author deserve high praise for very clear and very readable presentations of the material at hand . . . While the book is thoroughly readable it still falls short of the need for a comprehensive antenna handbook in the amateur field." *O. P. F.*

Radio & television news, Aug. 1948, p.130. ⅔ col.

"Hams and servicemen have been waiting a long time for a book covering the most popular types of antennas—this is it . . . Thoroughly practical and covers such subjects as radiation and propagation of radio waves, transmission lines, basic antenna theory, low and medium frequency antenna systems, high frequency antenna systems, v.h.f. and u.h.f. antenna systems, receiving antenna considerations, coupling to the antenna system, measuring equipment and techniques, and antennas for navigational aids . . . All in all, this is a FB piece if we ever saw it!"

Smullin, L. D., & Montgomery, C. G., ed. Microwave duplexers. 437p. 1948. McGraw, New York, $6.50. (M.I.T. radiation laboratory series, v.14.)

Electronics, July 1948, p.206. 1 col.

"This nine-chapter book, representing the work of six authors, deals primarily with prob-

lems where simultaneous transmission and reception is required in a pulsed microwave radar or communication system utilizing a common antenna system and operating frequency. The text, illustrations and mathematics describe the design and behavior of microwave plumbing as well as the special tubes necessary for electronic switching between the transmitting and receiving functions . . . The information is authoritative and is representative of the outstanding work performed by personnel of the MIT Radiation Laboratory during World War II while operating under the National Defense Research Committee . . . Recommended as a permanent reference book for engineering personnel." *Samuel Freedman.*

Wireless engineer, Sept. 1948, p.302. ⅜ col.

"Of the twenty-seven volumes in the series this must have been one of the most difficult to write, combining as it does, a mass of important empirical data, a valiant attempt at a theory of the gaseous discharge, and much detailed circuit analysis. The authors are to be congratulated on having so far disentagled the various phenomena encountered in duplexers as to make a logical, if sometimes trying, study of the various aspects of the subject . . . As in all books of this series there are remarkably few typographical errors. The practical design data should prove valuable to all who work in this field." *J. T.*

Somerset, F. G. Refrigeration for the meat trade; practical handbook on the service and maintenance of refrigerators for butchers. 114p. 1948. Practical Press, Ltd., London, 8s. 6d.

Food, Aug. 1948, p.253. ⅔ col.

"Contains a wealth of information for those whose business includes the use of refrigerating plant. It is surprising that the author has been able to cover such a wide field in so small a compass . . . The information contained . . . may be roughly divided into two classes—theoretical and practical. The theoretical portion will, in all probability, prove hard to the understanding of those readers who have not had the benefit of any scientific education, but this should in no way detract from the clear explanations which form the practical part of the book. The brief outline of what happens to meat when it is frozen is particularly appropriate to a book written primarily for butchers." *Osman Jones.*

Stevels, J. M. Progress in the theory of the physical properties of glass. 104p. 1948. Elsevier, New York, $2. (Monographs on the progress of research in Holland.)

Chemical and engineering news, Aug. 23, 1948, p.2518. 11 l.

"Pure silicate, borate, phosphate, and germanate glasses are considered in the first main section, 'The Density of Glass' . . . Subsequent sections deal with the electric conductivity of glass, dielectric losses of glass, and molecular refraction of glass, with the aid of tables, graphs, and equations. Appendixes give the compositions in weight percentages and in mole percentages of the glasses mentioned."

Chemistry & industry, Sept. 11, 1948, p.589. ⅝ col.

"There are numerous misprints throughout the text, some of which will puzzle a reader unfamiliar with the subject and the book would be improved if edited by someone with a better knowledge of English than is apparent in this volume. The paper cover is unsubstantial particularly as the book is one for frequent reference. The text is well annotated but some footnotes might well be included in the text. The monograph will be widely used by the glass technologist concerned with technical glasses and will be studied with advantage by the chemist interested in the vitreous state." *R. E. Bastick.*

General Electric review, Sept. 1948, p.53. ⅝ col.

"The Preface, written in February 1946, indicates that this book covers work performed and theories considered during the war years on the structure of glass through the study of certain physical properties, measured at room temperature only and correlated with chemical composition . . . The many glass compositions and the many literature references are of great help to the theoretically minded person. The book suffers from lack of proofreading and deserves to be expanded and critically brought up to date." *Louis Navias.*

Swain, Ralph B. Insect guide; orders and major families of North American insects. 261p. 1948. Doubleday, New York, $3.

Agricultural chemicals, July 1948, p.39. 2 col.

" 'Getting Acquainted with Insects' could well have been the title of the . . . book . . . Illustrated by more than 450 pictures, of which 330 are in color, with a non-technical text, it provides the simplest means yet presented of becoming acquainted with insects. More than this, the arrangement encourages use . . . The aims and purpose of the book are to provide simple, ready means of becoming acquainted with the major groups of insects. This it does in a way easily understood. The book does not seek to provide for a key for the recognition of individual species nor to discuss their importance. The principle of illustration, however, has been effectively used in the text . . . The illustrations are excellent. The text is well planned and written in a simple, pleasing and direct style . . . Should greatly aid in an understanding and appreciation of our friends and enemies—the insects. Those concerned with producing or distributing materials and devices for insect control will do well to use this simple, well-organized handbook." *S. A. Rohwer.*

Nature magazine, Aug.-Sept. 1948, p.385. ¼ col.

"An excellent guide to the identification of the members of the orders and major families of North American insects . . . Written in non-technical terms, and the illustrations total 450, of which 330 are in full color."

Tanner, F. W., & Tanner, F. W., jr. Bacteriology; a textbook of microorganisms. Ed.4. 625p. 1948. Wiley, New York, $4.50.

American journal of public health, Aug. 1948, p.1166. ½ col.

"Designed for teaching in undergraduate college classes, not in medical schools. Considered from the viewpoint of its expressed purpose, of presenting bacteriology as biology, this reviewer likes it. The text is well written and very readable, and the book is well made up by the publishers. Especially noteworthy are the sketches, in Chapter 1, of scientists prominent

in developing bacteriology. The glossary of terms and literature citations should be useful." *James E. Fuller.*

Taylor, Denis, & Westcott, C. H. Principles of radar. 141p. 1948. Cambridge Univ. Press, London, 12s. 6d. (Modern radio technique series.)

British science news, v.1, no.11 1948, p.22. ½ col.

"In spite of all that has been written on radar for the general reader since the science emerged from behind the iron curtain of security, there must be many who would admit that their knowledge does not go far beyond the principle of measuring range by the observation of reflected radio energy. The authors address themselves to readers who fall in this category because they have other scientific preoccupations, but possess a sufficiently advanced knowledge of ordinary radio and electromagnetic theory not to be deterred by a mathematical demonstration of some of the ideas involved. At the same time, even if the formulae are taken on trust, the book enables all to obtain a comprehensive and up-to-date picture of what has been accomplished by radar, and what are the limitations of the different systems." *B. K. C.*

Instrument practice, July 1948, p.382. 1⅛ col.

"As is only to be expected from the authors (one of whom is superintendent at the Telecommunications Research Establishment, and the other was, until recently, Senior Scientific Officer at the same establishment), the work has been well handled and much information has been conveyed in a concise and clear manner. It may be commended to all readers who possess the requirements laid down in the preface, i.e. a knowledge of electromagnetic theory, calculus, the use of the operator *j*, and normal radio practice."

Wireless engineer, Aug. 1948, p.267. ¾ col.

"The authors assume that readers who need detailed information on radar techniques will refer to other volumes in the series, and have therefore concentrated on expounding the general principles peculiar to radar. The formulae derived are, however, illustrated by a number of numerical examples typical of different types of equipment. A book of this compass is likely to give the reader a clearer general picture of essentials than the more elaborate works on the subject . . . Can be recommended as a clear, concise presentation of the subject." *M. G. S.*

Wireless world, Sept. 1948, p.331. 1⅛ col.

"Accurate, clear and specific . . . Keeps firmly to essentials and does not get entangled in a maze of engineering and circuitry. References are given to detailed treatment in *Journal I.E.E.,* Part IIIA and elsewhere. The disadvantage of the background is that the examples are drawn preponderantly from systems developed at T.R.E.; and especially the metre-wave types which had little or no future even in 1945. Among wartime systems, the rocket-detecting and proximity-fuse radars, which might be expected to have most post-war military significance, are not mentioned; and ship-borne radar, which is the most important at the present day, is summarily dismissed. This backward-looking tendency is regrettable in an otherwise excellent book." *M. G. S.*

Taylor, Donald W. Fundamentals of soil mechanics. 700p. 1948. Wiley, New York, $6.

Engineering and mining journal, July 1948, p.123. 10 l.

"A scientific approach to the subject of soil mechanics is stressed . . . Practical applications of theory are then treated in discussions of soil tests, seepage in soils, strength and deformation characteristics of soils, stability of slopes, bearing capacities and others. A list of 174 references concludes this valuable text on a comparatively recent science."

Journal of the Franklin Institute, Sept. 1948, p.261. ¼ p.

"The author, recognizing the extensive scope of the subject, has kept in mind primarily the graduate student when writing this book. Nevertheless, by omitting certain portions it may be used on the undergraduate level. The theoretical material is described thoroughly and the emphasis . . . is on correlating the fundamental theories and their applications in the laboratory and the field. Many aspects of soil mechanics are covered . . . Well referenced and should prove of value to persons engaged in the field of foundation engineering." *H. N. Michael.*

Soil science, Aug. 1948, p.161. 10 l.

"Although written for the benefit of graduate students in engineering, this book contains material that is highly interesting to those who are engaged in the study of soils in relation to agriculture . . . Well illustrated and . . . contains a considerable amount of very useful data. One of the most interesting figures is that showing the Casagrande soil classification for airfield projects. A set of problems is appended to each chapter, and a list of 174 references is given at the end of the book."

Theilheimer, Wilhelm. Synthetic methods of organic chemistry; a thesaurus; translated from the German by Hans Wynberg. v.1: 1942-1944. 254p. 1948. Interscience Publishers, New York, $5.

Mines magazine, Aug. 1948, p.39. ⅕ col.

"The first of a projected series; the second volume will cover the years 1945-46. Following 1946 an annual volume is planned . . . Essentially a reference book for consultation when an unfamiliar reaction is being considered . . . Gives a rapid evaluation of new variations, if any, which have been developed between 1942 and 1944 on a specific type of chemical change in an organic molecule. Each entry is a very short summary which limits itself to a description of the reaction, the method, the conditions employed, and the names and amounts of starting materials and products. The original references and in many cases, supplementary references, are given."

Thomas, D. Hylton. Applied electronics. 131p. 1948. Blackie, London, 7s. 6d.

Electrical review, July 23, 1948, p.136. ⅛ col.

"Intended for students of Higher National Certificate standard, but it could probably be read with interest by some practicing engineers. The explanations, while conventional, are in general clear and the author has not succumbed to the temptation to include too much detail likely to obscure the important characteristics. A few examples are worked out in the text and others are given at the end of each chapter. There are a number of inaccuracies . . . but fortunately they are not

usually of the kind likely seriously to misinform the reader." *V. J. F.*

Electrical times, Aug. 12, 1948, p.184. ¼ col.

"An exhaustive treatment of the subject is not given, but sufficient fundamental theory, illustrated with applications, gives an indication of the possibilities and the limitatons of electronic equipment. References to current literature are made and many suggestions given for laboratory work. Examples from examination papers have been selected and the solutions appear at the end of the book."

Titmuss, F. H. Concise encyclopedia of world timbers. Technical Press, London, 10s. 6d.

Wood, Aug. 1948, p.233. ½ col.

"The timbers in use in different parts of the world certainly run into thousands so the scope of the work can scarcely with justice be termed encyclopædic. Unfortunately this is not the most serious criticism, however, for there are a number of errors in the text which detract from its value as a work of reference. These are chiefly in the botanical names . . . There is a good deal of useful information in the book and it is a great pity that, through lack of efficient checking before publication, so much of its value as a reference book has been lost." *R. W.*

Walker, R. C. Photo-electric cells in industry. 517p. Pitman, London, 40s.

Electrical review, Aug. 20, 1948, p.300. ⅝ col.

"The information . . . is presented almost wholly in a descriptive way so that the text is easily readable. The first six chapters, roughly 200 pages, describe the main types of cell, excluding photo-conductive types, and the basic circuits and associated amplifiers, relays, light sources, optical systems, etc., finishing off with counting and timing circuits. The remainder . . . deals with applications to machine control, light measuring instruments, television transmission, sound reproduction, facsimile picture transmission, alarms and indicators of all kinds . . . The type is large and clear. The diagrams are in general strategically placed with reference to the text. The price is high." *L. W.*

Electrical times, July 22, 1948, p.104. ⅛ col.

"Intended for the practical man, sufficient theory is given to explain the working principles, although mathematical treatment has been reduced to a minimum. Line diagrams are extensively employed to present lucid explanation of many of the applications of the photo-electric cell, all of which are being or have been employed in industry. At the end of each chapter a bibliography is given so that a further, more detailed study may be pursued if required . . . Can confidently be recommended to any engineer, either to help specifically in his work, or to expand his general knowledge."

Electrician, Aug. 13, 1948, p.488. ½ col.

"Apart from its price, the present text is an ideal form of technological treatise. Sufficient theory is given to indicate how the topics under discussion link up with fundamental science, and a wide relevant field of application is covered in a clear and authoritative style . . . The text gives ample references and should prove a valuable text-book for some time to come." *L. E. C. H.*

Walter, Carl W. Aseptic treatment of wounds. 372p. 1948. Macmillan, New York, $9.

American journal of nursing, Aug. 1948, p.42. ½ col.

"An outstanding contribution to surgical technic. Those who are interested in teaching surgical technic in schools of nursing will find in this book a thorough analysis of the basic principles governing asepsis and a detailed analysis of all associated procedures. The arrangement of the book is excellent . . . May be recommended to the library of the school of nursing." *Charlotte C. Dowler.*

Journal of the American Pharmaceutical Association, scientific edition, Sept. 1948, p.381. ½ col.

"Beginning with a history of the development of the concept of asepsis, and discussing in full detail the various phases of aseptic technique, this book offers a ready reference for surgeons, nurses, pharmacists, and bacteriologists. Other hospital personnel concerned with the necessary space and equipment for carrying out aseptic technique in the hospital will also find this volume valuable. A long list of references and a good index add to its usefulness."

Watts, J. L. Electric motor control gear; starting, protection and speed. 84p. 1948. Iliffe, London, 5s. net.

Mechanical world, July 23, 1948, p.109. ½ col.

"A very good and useful manual on an important branch of electrical technology, and the author has treated his subject with commendable clarity and conciseness . . . Considering its size, it is surprisingly comprehensive, and it gives, at a very moderate price, just what is wanted by electrical engineers engaged in the installation and maintenance of industrial electrical plant. The student will find the book a useful supplement to his regular text-books." *G. W. S.*

Werner, Earl F. Aircraft instrument maintenance. 462p. 1948. McGraw, New York, $7.50.

Aeronautical engineering review, Sept. 1948, p.99. ⅝ col.

"A well-balanced blend of practical and theoretical information for the guidance of field service men. The author has restricted his subject matter to standard types of instruments and has treated these clearly and comprehensively from the maintenance standpoint . . . The book does not include any discussion of the fuel-flow meter, fuel-air ratio indicator, ice- or stall-warning indicator, terrain clearance indicator, attitude gyro, or such relatively uncommon instruments as Mach meters or accelerometers." *Charles C. Greene.*

Aeroplane, Aug. 27, 1948, p.259. ¾ col.

"Sets out to cover a wide range of instruments and associated equipment . . . There are two main faults to be found with the volume, and these persist throughout the whole work. The first is that the author fails to appreciate the necessity of detailed explanation of instrument operation when catering for beginners . . . The second fault is that the author is much too dogmatic in his definitions and in his statements concerning the operation of instruments generally . . . To sum up, the best that one can say of this book is that it covers a wide range of instruments and will provide a useful work of reference to the experienced in-

strument mechanic. However, the volume certainly belies its name, and the author's intention of catering for the beginner and the student is not by any means fulfilled." *C. W.*

West, Phillip W. Calculations of quantitative analysis. 162p. 1948. Macmillan, New York, $2.75.

Paper trade journal, July 15, 1948, p.66. ¼ col.

"Although . . . arranged in the form of a series of lectures for college chemistry students, it may be considered somewhat as a handbook for chemists in the industry who, from time to time have to make quantitative analysis . . . Among the subjects covered are: chemical factors and the fundamental calculations of bravimetric [sic] analysis; titrimetric analysis and solution strength; calculations involving percentage, specific—gravity percentage, molar, normal and titer solutions; oxidation —reduction; chemical equilibria and law of mass action; and the reliability of analytical results."

White, Alfred H. Engineering materials. Ed.2, revised. 686p. 1948. McGraw, New York, 36s.

Iron and coal trades review, Aug. 13, 1948, p.361. ½ col.

"Intended for engineering students, enough theoretical explanation of the subjects being given for the behaviour of materials to be understood . . . Although . . . intended for students, it should also be useful to those of more advanced knowledge and experience, who, from time to time, may wish to refresh their memories or to acquire information on subjects outside normal fields of activity . . . The various chapters are complete self-contained units. An extensive index completes an exceedingly useful work of reference."

Zimmerman, O. T., & Lavine, Irvin. Scientific and technical abbreviations, signs and symbols. 476p. 1948. Industrial Research Service, Dover, N. H., $7.50.

Aeronautical engineering review, Aug. 1948, p.79. ⅔ col.

"This compilation begins well, with a general list of about 6,500 scientific and technical terms and their abbreviations and symbols. The field in which each term is used is usually indicated, and this general list is therefore a cross index of a good part of the book. The more general index, at the end, of twelve pages, containing about 600 terms, furnishes a guide to subjects and to specialized signs and graphical symbols, such as those of the *U. S. Weather Code* . . . As the field of both compilers is chemical engineering, the coverage of the book is especially good for that field and its related subjects . . . This is the most comprehensive compilation of its kind at present available, and it can be recommended." *Maurice H. Smith.*

Industrial standardization, Aug. 1948, p.100. ⅔ col.

"The authors . . . have . . . collected the best source material and assembled it in one volume. To the best of this reviewer's knowledge, no similar volume of such diversified data on abbreviations and symbols has ever before been compiled. Its usefulness seems unlimited. It would seem impossible to name a single individual in the scientific and technical world who would not find this book most helpful. The whole standardization movement has been helped by the publication of this volume." *W. H. Deacy.*

Paper trade journal, July 15, 1948, p.66. 7 l.

"Essentially a time-saving handbook giving thousands of abbreviations, signs and symbols of terms used in numerous fields such as chemistry, chemical engineering, thermodynamics, heat flow, humidity, mechanics, hydraulics, acoustics, illumination, electricity and electronics, mapping, communication, commerce, mathematics and statistics."

Zoethout, W. D. Laboratory experiments in physiology. Ed.4. 263p. 1948. Mosby, St. Louis, $3.

Science counselor, June 1948, p.64. 11 l.

"The generous use of photographs and drawings of the equipment and operative setups allows the student to grasp the technique of the experiment and to work at his own speed . . . Will serve well its purpose as a laboratory text . . . A worthy book of reference for the physiology laboratory. The directions are simply and clearly worded. Study questions are provided to indicate the significance of the experiment." *Alfred Halpern.*

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